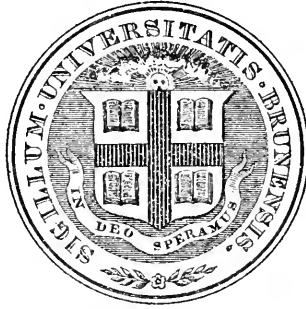


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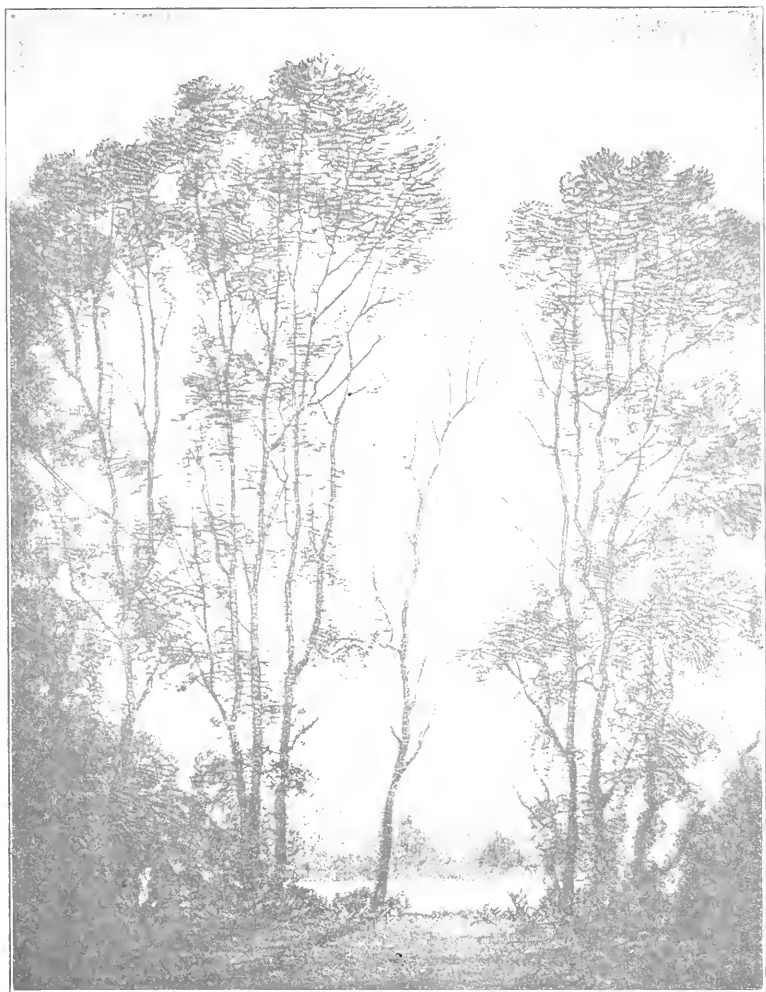
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TREES

By Robert Nisbet, N. A.

RHODE ISLAND ARBOR DAY

MAY 10, 1929

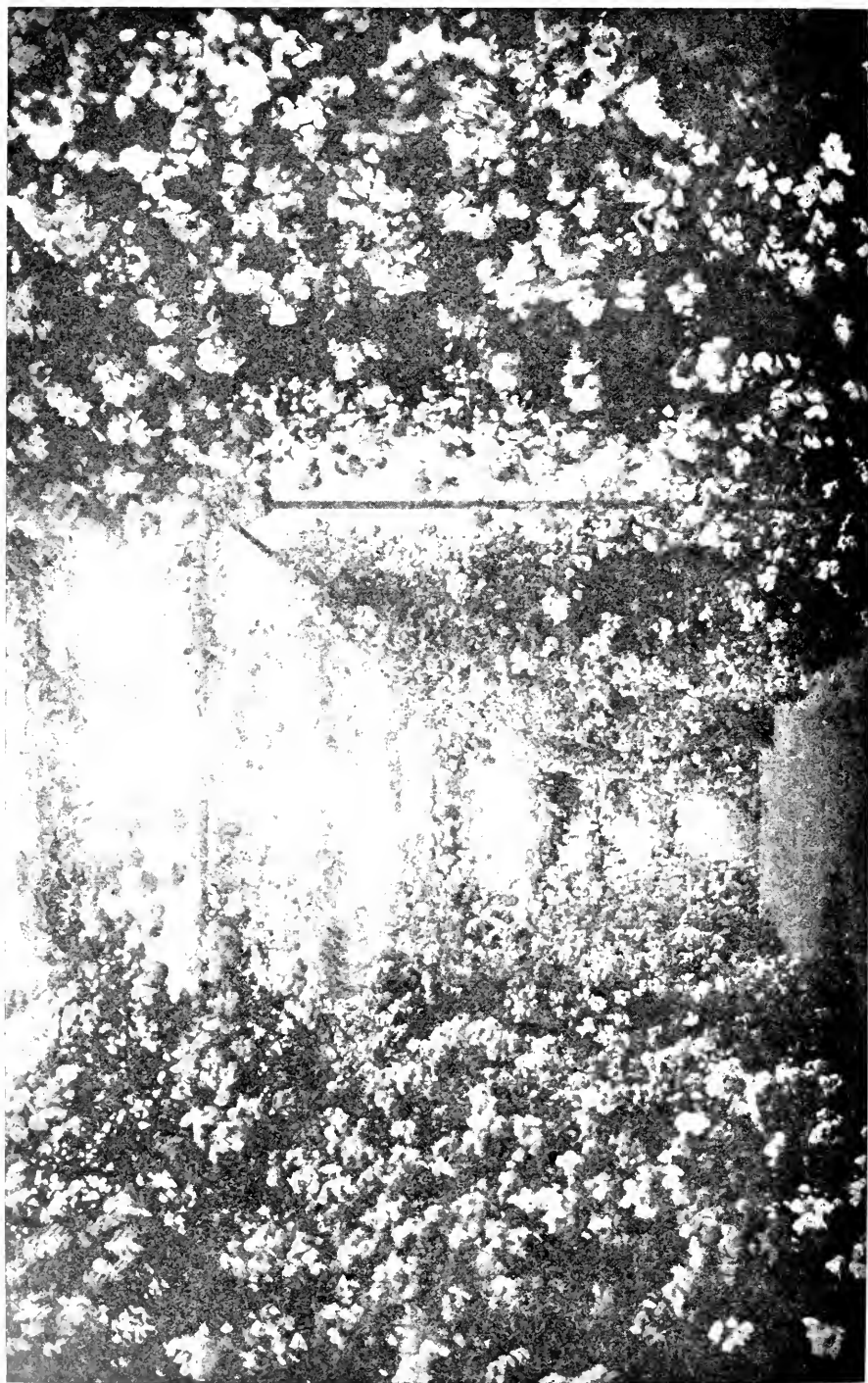
FOES AND FRIENDS OF TREES

THIRTY-EIGHTH ANNUAL PROGRAM
FOR THE
OBSERVANCE OF ARBOR DAY
IN THE
SCHOOLS OF RHODE ISLAND
MAY 10, 1929

(Edition of 95,000)



THE COMMISSIONER OF EDUCATION
STATE OF RHODE ISLAND



ROSE ARBOR AT ROGER WILLIAMS PARK

State of Rhode Island
Public Education Service

COMMISSIONER'S ARBOR DAY MESSAGE.

To the Teachers and Students of Rhode Island Schools:

The trees putting forth their leaves and blossoms are telling you a wondrous story. They are speaking of the truth that abides in the heart of nature; they are singing of the beauty with which God has filled the earth; they are sending you a real Arbor Day message.

"One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can."

In past Arbor Day programs the practical features of proper observance have been duly stressed and hundreds of pages have been given to the planting and care, the uses and benefits of trees. You who have saved past numbers have a store of practical knowledge of trees, and this number, in its special theme of "Foes and Friends of Trees," gives you valuable information about nature's protection of trees. But the school is to teach more than the material things of life. The school teaches that the life of mind and heart is more than the life of the body.

Arbor Day speaks of things of the spirit as well as of matter. Emerson said: "He who knows the most, he who knows what sweets and virtues are in the ground, the waters, the plants, the heavens, and how to come at these enchantments, is the right and royal man." Some may never rise above the level of themselves, but to you of the schools Arbor Day and every school day may open vistas of greater things of life. There is a spiritual stimulus in trees, a lifting power in nature.

I hope that Arbor Day will come to you this year with the newness and freshness of a springtime, with joy in effort toward higher levels of school life, with blessings of the ministry of trees from Him who made them.

A large, elegant handwritten signature in cursive script, reading "Arthur E. Ranger". The signature is written in dark ink and is positioned centrally below the main body of text.

Commissioner of Education.

"Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!"

SPECIAL THEME: FOES AND FRIENDS OF TREES

PLANTING OR DEDICATION EXERCISES

—*Katherine Garrison Chapin.*

Yet, maybe, in the days to come,
A memory shaft they'll build for me,
And through their groves there may walk some
With praise and thanks for every tree!

—James B. Carrington in Scribner's.

It shall blossom abundantly, and rejoice even with joy and singing—
They shall see the glory of the Lord, the excellency of our God.

4

WELCOME, LOVELY SPRING

CELEBRATING

Tune: "Yankee Doodle"

Oh, Lovely Spring has come once more;
We hear the birds' sweet singing,
And flow'rs with perfume rich and rare
Along our path are springing.

Chorus—

Welcome, welcome, Lovely Spring!
We children love you dearly.
We love the pretty flowers you bring,
And birds that sing so clearly.

Robin Redbreast hops about;
We hear the flickers drumming;
The goldfinch and the gay bluebirds
Say: "Happy times are coming!"

—Grace H. Miles.

(1st Child enters with hoe, spade and package of seeds.)
Come, help me celebrate Arbor Day
In the happiest kind of a task.
We'll plant some seeds and pull some weeds—
What better fun could one ask?

(2nd Child enters with carefully wrapped young tree.)
Come, help me celebrate Arbor Day
By planting a maple tree.
Though now 'tis small, 'twill soon grow tall
And shade both you and me.

(3rd Child enters, dressed for fishing, carrying pole, etc.)
Come, help me celebrate Arbor Day
In the way you've just been wishing—
I've planted my plants, so here's our chance
To take time off for fishing!

—Sarah Grimes Clark.

THE SEEDS GO TRAVELING

On their autumn travels the tree seeds go.
With parachutes some of them fly;
Singly, in pairs, and in crowds they blow
As the winds go sweeping by.

Hither and yon on the passing breeze,
Thistledown light they float;
Like tiny airplanes are some of these,
And there goes an elfin boat.

Its sails are set as it glides away
In quest of a place to grow;
For some far-off port it is bound to-day;
Just where, no one can know.

With the aid of hooks and barbs some seeds
Oft steal a passing ride
On the backs of birds and beasts—thus weeds
Get scattered far and wide.

Nut seeds are wrapped up in coats and furs
Till Jack Frost takes a hand
With squirrels in opening shells and burrs
And sowing them over the land.

And if you should chance to be strolling by
Witch-hazel some late fall day,
Watch out for a sudden shot in the eye,
For that is witch-hazel's way.

Of scattering seeds. Though it has no gun,
It aims like a marksman true;
Witch-like it may find it Hallow'en fun
To shoot from the copse at you.

—Maude Wood Henry.

THE TREE'S FRIENDS.



1. "Oh, the tree loves me," sang the ti - ny flow'r, "For he shades me all the day,
2. "Oh, the tree loves me," sang the hap - py bird, "My nest on his might - y arm
3. "Oh, the tree loves me," sang the lit - tle child, "For he gives me blos - soms sweet,



From the sun's fierce heat or the pelt - ing rain, And con - tent at his feet I stay."
Is fast - ened safe, and my ba - bies rock In their cra - dle safe from harm."
Then the sun shines warm on his la - den boughs Till the ripe fruit drops at my feet."



From "Songs of the Child World."

THE PARKER WOODLAND

The Parker Woodland lies in Coventry,—three hundred beautiful acres of wild woodland, rushing brooks, and quiet hillsides, where creeping juniper and other evergreens make a natural setting of great beauty and perennial charm.

In winter, with the snow on bended boughs, the upper section of the Woodland near the Foster line looks like the setting of a grand Christmas festival. In spring, migrating birds come, to swell the number of permanent residents and the June chorus of nesting species. Shade and coolness blend with quiet through the dusty summer, and in fall the merry water of "Turkey Meadow" and "Pine Swamp" brooks beguiles all who are so fortunate as to listen to their welcome invitation to the woods.

Many years ago a saw-mill stood on the brink of the brook where now only a flume of stone remains. "Turkey Meadow" brook suggests that once the broad meadow through which it flows was a favored haunt of turkeys. Could the name have come down from the times when the wild turkey was found in southern New England, or was it given because the brook ran through a turkey-raising area? The brook bears another name suggesting slave labor at the Mill about the time of the Civil War, of which only the memory is left to us now.

Once a traveled road went up the hill through the Woodland, but that, too, "the Biscuit Hill road," is fast becoming a thing of the past. Traveled roads are not desirable in refuges and sanctuaries, so this old highway will probably become obliterated except as it forms part of a trail.

The wildness of the Woodland can best be enjoyed by those who find their way with a guide to its rugged boulders, unspoiled stands of trees and secluded reaches.

As a gift to the Audubon Society of Rhode Island to be maintained for the protection of birds, wild life, trees and plants, it will bring much benefit to the state.

Until it is properly endowed, it remains in the hands of the generous donor, but when the time comes to use this beautiful tract, it will prove the wisdom of setting it aside in the interests of conservation.—*Alice Hall Walter.*

THE TREE PARASOLS

The trees are like big parasols
In brightest green arrayed;
The trunks are nice straight handles,
And the green leaves make the shade.

—*Maude M. Grant.*

ARBOR DAY

Arbor is a Latin word that always means a tree,
And so when we have Arbor Day, its tree day,
don't you see?
And we should plant a tree, at home, by road
or field,
And then you know in years to come, its
fruitage it will yield.

Perhaps 'twill give us fruit to eat, or nuts we
love so well,
Or maybe it will just give shade,— its mission
you can tell;
So spare the trees as years go by, be thankful
for their shade,
For when God made his nicest things, a tree
was what he made.

—*Myrtle Barber Carpenter.*

SONG FOR ARBOR DAY

Tune: "Good-night, Ladies"

Happy children!
Happy children!
Happy children!
Glad Arbor Day has come.
Round the tree we'll dance and sing,
Dance and sing, dance and sing—
What joy its shade to all will bring
As the years go by!

Little children!
Little children!
Little children!
The tree we plant to-day
Will live to bless for many a year,
Many a year, many a year—
Weary pilgrims, resting here
'Neath a summer sky.

—*May B. Bryant.*

FROM "THE FORGE", JENKS JUNIOR HIGH SCHOOL PAWTUCKET

WINTER

Oh! Cold and breezy winter
Is coming on its way;
The sun will sink, the wind will blow,
The snow will come to stay.

Oh! Cold and chilly winter
Is come to stay awhile.
The wind will blow and cheeks will glow,
But ne'er the sun will smile.

Oh! Cold and icy weather
When winter comes to stay;
The sun will sink, the wind will blow,
'Cause winter's on its way.

—Catherine Smith '29.

MY WISH

I wish I were a tiny seed
Down in an earthly bed,
When someday I should sprout above
And look and raise my head.

Then I would have a little maid
To water me by day,
And she would bid me grow up tall;
And there I'd live and stay.

At last as I begin to droop
My little maid is sad,
Because she thinks she is to lose
A friend who made her glad.

—Ruth Whipple '31.

THE FROST ARTIST

The door was shut as doors should be
No one about the house I see,
Yet busy with his brush and pen
Jack Frost is working hard again.
He traces windows silver white,
Horses and knights in armor bright

And ships with sails, and flowers rare
And branching trees are waving fair.
I hear no sound so softly creep
And glance about while others sleep,
And there in moonlight beams, I see
Jack Frost as busy as can be.

—Eleanor Flynn '29.

AFTER THE SLEET STORM

The world is an icy Fairyland
A world of frozen white;
The trees are bending downward
With the crystal work of night.

The sunshine falls on the silvery lace
And it glitters in dancing fun,
For every twig is a brilliant beam
Of jolly old King Sun.

—Hallie F. Franklin, Pupil of Twelve Years.

GUESSING TREES IN WINTER

Before Linda Robinson joined the Girl Scouts she thought that you had to study trees outdoors in summer. Now she knows that a girl can learn about trees indoors in the winter when the snow is blowing so thick that you can not see even the elms across the street.

All of Linda's patrol took the nature course last summer, but their interest in trees did not stop with the falling of the leaves. They had still to learn the outline of the bare branches against the winter sky, the look of the bark on the trunk, the different formations of the twigs, and the green spines of the various evergreens.

Linda's patrol had a tree party in December. Each girl chose a tree beforehand and learned about it. The leader knew what variety each chose, so that there would be no duplications. Each drew on a sheet of paper as accurate an outline of her bare tree as she was able. Each brought some twigs of her tree.

The sheets of paper were numbered and fastened on the wall. The twigs were placed on numbered papers. Each girl was given a pencil and paper, and at the tap of a bell they all began identifying the pictures and the twigs. The one who had the greatest number correct was given the title of Forester.

When Linda's father stopped for her on his way home he said:

"I used to know some tree riddles when I was a boy. Here is one—'What is the oldest tree in the world?'"

After the girls had guessed every tree they knew, he told them,

"The elder tree."

"Why is the heart of a tree like a dog's tail?"

The answer to that was,

"Because it is farthest from the bark.—*Christian Herald*."

MAY.

ANNA M. PRATT.

1. The or - chard is a ro - sy cloud, The oak a ro - sy mist, And
2. A mes - sage comes a - cross the fields, Borne on the balm - y air; For

oh, the gold of the but - ter - cup, The morn - ing sun has kissed! There are
all the lit - tle seek - ing hands, The flow'rs are ev - 'ry - where.

twink - ling shad - ows on the grass, Of a my - riad ti - ny leaves, And a
Hark! a mur - m'ring in the hive; List a car - ol sweet; While

twitter - ing loud from the bu - sy crowd, That build be - neath the eaves.
feath - ered throats the thrill - ing notes A thou - sand times re - peat.

CHORUS. Gaily.

Then sing, hap - py chil - dren! The bird and bee are here; The

May-time is a gay time, The blossom time o' the year. Then sing, hap - py chil - dren! the
bird and bee are here; The May-time is a gay time, The blossom time o' the year.

AN APPLE ORCHARD IN THE SPRING

Have you seen an apple orchard in the spring?

In the spring?

An English apple orchard in the spring?

Where the spreading trees are hoary

With their wealth of promised glory,

And the mavis sings its story,

In the spring?

Have you plucked the apple blossoms in the spring?

In the spring?

And caught their subtle odors in the spring?

Pink buds bursting at the light,

Crumpled petals baby-white,

Just to touch them a delight—

In the spring?

Have you walked beneath the blossoms in the spring?

In the spring?

Beneath the apple blossoms in the spring?

When the pink cascades are falling,

And the silver brooklets brawling,

And the cuckoo bird soft calling,

In the spring?

If you have not, then you know not, in the spring,

In the spring,

Half the color, beauty, wonder of the spring.

No such sight can I remember

Half so precious, half so tender,

As the apple blossoms render

In the spring.—*William Martin.*

SHRUB IMMIGRANTS

By Marion D. Weston, Ph.D.

There is something intimate about the shrubbery around New England homes. From the days of the Pilgrims a house has not become a home until it has been surrounded by familiar shrubs. At the present time every home must have its quota of dwarf evergreens. Whether it be Lilacs or fancy evergreens, tradition dictates that the shrubs shall come from across the sea. Not because New England has no lovely forms to offer, but because the fascination of far away lands still lures us on.

A Favorite For 300 Years

The affection of the early settlers for European shrubs needs no elaborate explanation. One by one old favorites were brought from Europe to make more



Rosa Multiflora. The Ancestor of Your Rambler Rose.

—Courtesy Arnold Arboretum

homelike the dwelling place in the new land. The Lilac, taking more kindly than the rest to the strange environment, soon made a bit of Old England about almost every home.

The word Lilac comes from the Persian lilac meaning a flower. Its origin, for many years shrouded in mystery, has recently been traced to Bulgaria. From this original Lilac, the familiar lavender-flowered species of old-fashioned gardens, have been developed most of the lilacs in common cultivation at the present time. Horticulturists of France are responsible for the greater part of this wealth of beautiful forms produced during years of painstaking cross-breeding and selection. One hundred and twenty varieties are growing in the Arnold Arboretum, Jamaica Plain, Mass. A visit in Lilac Time will furnish a perfect revelation of the Lilacs available for planting about the homes of today. Ernest H. Wilson writes of these descendants of the colonial Lilac. "Lilacs with snow white flowers; Lilacs with pink flowers; Lilacs with red and purple flowers;

Lilacs with blue flowers and Lilacs with every known shade of purple. Lilacs with single flowers; Lilacs with double flowers; Lilacs with flowers in erect broad trusses a foot and more high. Lilacs with flowers more than one inch in diameter; Lilacs with delightfully fragrant flowers; Lilacs with scarcely any scent and all descended from one species, *Syringa vulgaris*."

The fact that all these Lilacs are growing satisfactorily 40 miles north of Rhode Island proves that these newer arrivals are just as pleased with our New England climate as was their less showy ancestor of the days of the Pilgrims.

But not all of the Lilacs of the world are descended from the one species. Wild Lilacs are not confined to Europe. In fact the earliest Lilac to bloom is a lovely white species from China, common in Chinese gardens.



Buddleia Davidii Magnifica. Butterfly Bush. A Native of China

—Courtesy Arnold Arboretum

Horticulturists of the Orient have produced many beautiful forms from their native wild species. The ancestors of this particular Lilac have been found in North China.

The season closes with the Persian Lilac, once a favorite in New England gardens. For years it was assumed that this Lilac originated in Persia where it has been cultivated by Persian gardeners for centuries. The fact that seeds from wild Lilacs found in northwestern China have developed in the Arnold Arboretum into shrubs precisely like the Persian form would seem to prove that the shrub was taken from China to Persia in the dim ages of the past.

Where East Meets West

The Arnold Arboretum, founded in 1872 as a part of Harvard University, is "devoted solely to the acclimatization, cultivation and study of hardy trees and shrubs." The director aims to have growing within its borders all woody plants which are able to stand the climate of New England.

Ernest H. Wilson has spent years in foreign lands searching for trees and shrubs which may be made to feel at home in the latitude of Boston. Mr. Wilson has learned that plants from China and Japan are very likely to grow happily in the northeastern section of the United States. Attractive plants, having proved themselves hardy by successfully meeting the extremes of summer and winter in the Arboretum, are eagerly sought by nurserymen who place them immediately on the general market.

A New Arrival

One of these introductions, the so-called Summer Lilacs of the genus *Buddleia*, is beginning to be a familiar shrub in Providence. It is already making a brave showing in Roger Williams Park and indicates its willingness to live in private gardens throughout Rhode Island. In fact it prefers our climate to that of northern New England. The name, Summer Lilac, suggests at once its blossoming time, its color and the shape of the individual flowers. Mr. Wilson is irritated by the meaningless name, Butterfly Bush, which the nursery men insist upon using.

Our Debt To Japan

Among the more familiar shrub immigrants is the hardy *Hydrangea* which grows to a height of twenty-five feet in its native home in Japan. The species which we know best and cherish because of the lovely color changes which occur during the late summer and autumn months, was produced by the Japanese from their wild form.

It seems that our debt to Japan for beautiful shrubs is even greater than we would be led to surmise for the number of shrubs including Japanese in their names. The Japanese Quince, Japanese Barberry, Japanese Rose will immediately occur to everyone. But the list goes on until it appears that without the Orient our home grounds would lose much of their beauty.

The World's Favorite

New England would not like to live without her Roses. Yet New England is no fonder of the Rose than all the rest of our northern world. Mr. Wilson has traced out the names by which the Rose is known in many lands. The striking similarity may be explained only by saying that everyone loves the Rose.

"The Rose is the one flower whose name is common to the polyglot people of this land. In English, French, German, Danish, and Norwegian its name is Rose; in Italian, Spanish, Portuguese, Russian, and Latin it is Rosa; in Swedish it is Ros; in Dutch, Roos; in Bohemian, Ruze; in Hungarian, Rozsa, and in Greek, Rhodon. Is not this both remarkable and significant?"

We might go on to say that our own state name might be translated the, "Island of Roses", were it not that authorities differ as to its origin.

The world would have to lose its cultivated Roses were it not for the Orient. The garden Roses trace their origin to China. The English East India Company gaining a foothold in China over 300 years ago accomplished much that is not included in its official records. Certain officers became interested in transferring to their own English homes some of the beauty which they found in Chinese gardens. The original Rambler and the China Monthly Tea Rose quickly made themselves at home in England, becoming the forerunners of the Rose of today. Horticulturists became interested immediately in the unknown resources of the Orient. Collection and experiments in hybridization have been going on since the beginning of the 19th century. Chinese horticulturists were at work long before that on their beloved Roses. Each lovely garden Rose has a history of its own which has brought it a long, long way from its lowly ancestors.

A Unique History

The Greek name for the Rose, Rhodon, appears in the word Rhododendron, Rose Tree. Modern shrubby plantings are never complete without Rhododendrons. The genus includes the Azaleas, the deciduous group whose leaves fall in the autumn, as well as the evergreens known everywhere as Rhododendrons.

In spite of the fact that our southern mountains yield beautiful Azaleas perfectly hardy in New England, the more delicate European forms are in greater favor. The origin of these Ghent Azaleas is one of deep interest for this country since these particular immigrants, when their ancestry is traced back far enough, prove to be half American.

Nearly 200 years ago three American Azaleas were introduced into England. Years later a yellow species with flowers two inches across was found near the Black Sea. English horticulturists crossed the two with startling success. Belgian gardeners took up the work and perfected the wonderful Ghent Azaleas, the favorites of the modern world. The introduction of the strain from the warm Black Sea region made the hybrids sensitive to cold. Nevertheless quantities are sold in this country as potted plants and many are set out in gardens in spite of the fact that they often prove delicate in exposed situations.

Beautiful Azaleas grow wild in Asia. The Japanese call them Tsutsutsi. The best species from Japan is Rhododendron Kaempferi, a brilliant red in color, brought to this country over thirty years ago. Unlike the Ghent Azaleas the Japanese forms are perfectly hardy in New England.

From Many Lands

Azalea, Butterfly Bush, Hydrangea, Lilac, Rose and the roll call only just begun! If the list were complete and the history of each shrub written, the story would be the same. All woody plants successfully cultivated in New England gardens are natives of the Northern Hemisphere. No shrubs from South America, Southern Africa or Australia are hardy here. The vast majority of shrub immigrants have come to us from China and Japan, a small minority from Europe. The stream of immigration has been flowing on since the days of the Pilgrims.

In a few cases the shrub in cultivation in New England is exactly like its wild relatives growing on the rocky hillsides of China or Japan. The Butterfly Bush will illustrate this class.

Most of our shrub immigrants, however, are the result of careful breeding on the part of horticulturists in many lands. Often, as in the case of China's White Lilac, the wonderful product of modern plant culture has been perfected in the country where the original shrubs are found growing wild. The offerings of patient, skillful Chinese and Japanese horticulturists would fill many volumes.

Other immigrants, such as the Ghent Azaleas have been developed in lands far from their original homes. Occasionally the lovely hybrid forms have been brought back again to the home of their ancestors.

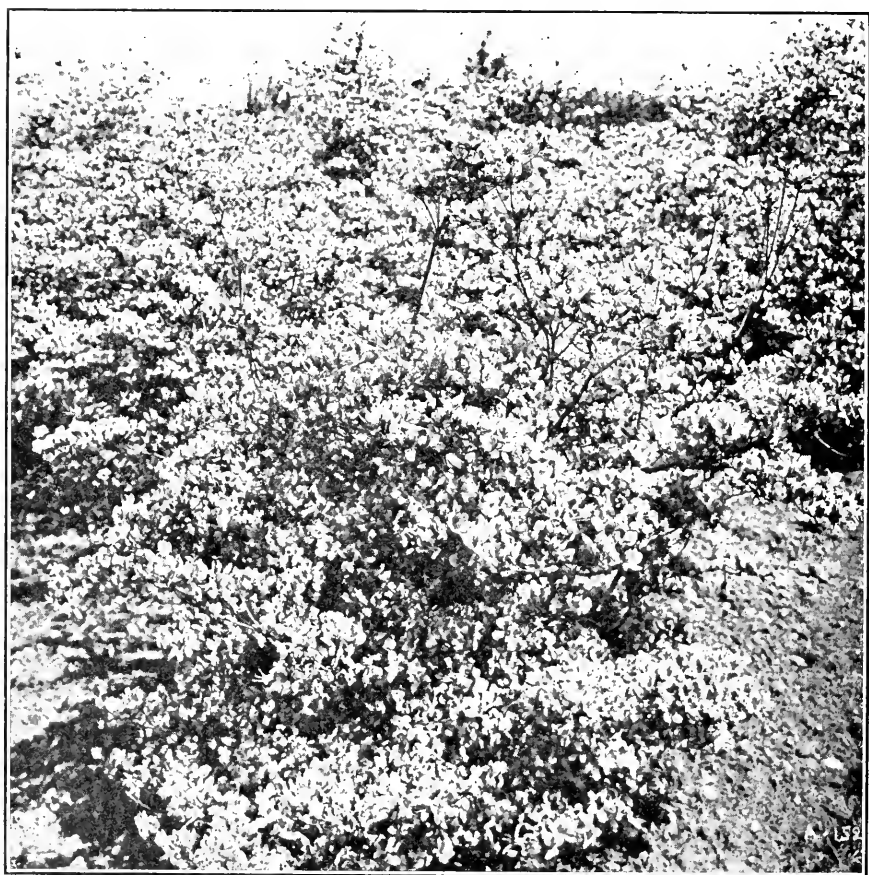
At Home In Roger Williams Park

Examples of these classes are plentiful in Roger Williams Park. A little knowledge of the history of these shrubs will add much to our interest in them and take away nothing from their beauty.

Everyone knows the Dahlia Gardens near the Broad Street side of the Park. The border bed between the Dahlias and the trees on the slope contains many fine Buddleias (Butterfly Bush) which are easily identified by their long, graceful lilac flower clusters. When looking at these shrubs we can fancy ourselves in far off China.

Equally well loved are the Rose Gardens near the main Elmwood Avenue gates. If you will study the border beds in Azalea times it will be easy to identify the scarlet flowers of Kaempfer's Azalea as well as the multitudinous soft tones of the Ghent Azaleas. As we look at the European forms we may think of the great yellow Azalea from the Black Sea, the lovely pink and white forms from our own southern mountains and their crossing by European experts making a history of unique interest. Mr. Triggs tells me that here in Providence he has found these Ghent Azaleas perfectly hardy. He raises the shrubs from seed.

The ancestors of the Roses lack the beauty of their more showy descendants. It is a far cry from the lowly wild Roses of China to the beautiful plants in the Rose Gardens of Roger Williams Park. The distance is just as great from the original Rambler, *Rosa multiflora*, to the magnificent American Pillar and the other glorious ramblers which play such a part in making Rose Fairyland at the park. But *Rosa multiflora*, the ancestor of all the Ramblers, still has an important part to play according to Mr. Triggs. If you will seek out the greenhouses and look across the road near the Boat Shop you will see this historic Rose which is used as stock for grafting purposes. Its clusters of tiny white flowers will assume a new and deep significance when we think of what this humble Chinese shrub has meant to the Roses of the world.



Azalea Kaempferi. A Native of Japan

—Courtesy Arnold Arboretum

POSSESSION

I was a child in Georgia;
My young eyes
Looked out on loveliness without surprise.

The ruddy hills
That compassed me about
Were friends of mine; they shut the strange
world out.

The pine trees were my intimates;
The yellow,
The wide, slow-swinging river, my play-
fellow.

The dusky forest
Where the live oaks stood,
Draped with dark moss, was my enchanted
wood.

The tallest popular,
Where the wood begins,
My priest, to shrive my childish soul of sins.

My sentinel,
The great magnolia tree
That by my window watched and guarded
me.

The feathered lyrist
Of the full moon's light
Was my own minstrel of the Summer night.

All, all were mine;
Love sealed them unto me;
The heart of childhood held them all in fee.

But now the years,
The aching, absent years,
Have made me know the truth—that I was
theirs!—*Roselle Mercier Montgomery.*

SPRING AWAITED

There is no green. The leaves are tightly
folded
In their brown sheaths, and fields are russet
sere;

And yet the trees have life, the sap is rising,
And swelling buds proclaim the spring is
here.

There's needed but a touch of April magic—
The warm south wind to bring the April
rain—

And through the dank brown mold will pierce
green lances,
And trees will trail a verdant mist again!
—*Blanche A. Sawyer.*

CARELESS PALM TREES

The palm trees gossip as they blow
This way and that and to and fro;
Unkemptly careless as can be,
They shake their tousled heads at me.

A palm tree's head is seldom neat,
Or fit to see upon the street;
I always want to send it home
To use, for once, a brush and comb.

A palm tree would be quite unique
With boyish bob, well-groomed and sleek;
Or shingled, waved, or ribbon-tied
And nearly parted at the side.

—*Beatrice Plumb.*

THE BIRDS' SPECIAL

"It's spring," Conductor True Bluebird
Is bringing up the southern train;
The earliest bird to spread the word
That it is March and spring again.

As the "Birds' Special" whirs along
I hear a robin singing—hark!
He's practicing his new spring song,
Accompanied by meadowlark.

—*Maude Wood Henry.*

OCTOBER'S PARTY

October gave a party:
The leaves by hundreds came,
The Ashes, Oaks, and Maples,
And the leaves of every name.

The sunshine spread a carpet,
And everything was grand,
Miss Weather led the dancing;
Professor Wind the band.

The Chestnuts came in yellow,
The Oaks in crimson dressed;
The lovely Misses Maple,
In purple, looked their best.

All balanced to their partners,
And gayly fluttered by,
The sight was like a rainbow,
New fallen from the sky.

Then in the rustic hollows
At hide-and-seek they played.
The party closed at sundown,
And everybody stayed.

LEAVES OF THE TREES IN AUTUMN

Leaves of the trees in autumn
Are years
Fluttering down;
Red ones are passion
And tears
Trembling blown—
As the birds to the south
And the kiss from your mouth
Have they flown.

Leaves of the trees in autumn
Are days
Whirling by;
Gold ones are memories
Of Mays
And the sigh
Of the wind in the west,
And the doubt in my breast
Growing high.

Leaves of the trees in autumn
Are hours
Drifting slow;
Brown ones are reveries,
The dowers
Of old woe,
Of the gold and red,
Lying trampled, outspread
For the snow.—*Nancy Telfair.*

WELCOME TO ARBOR DAY.

Words by E. F. STEARNS.

Arr from GERMAN FOLKSONG.

Cheerfully.

1. Welcome to Ar - bor Day! Glad-ly we sing, Na-ture from
 2. Welcome to Ar - bor Day! Come one and all, Join in our

sleep a - wakes, Greeting to Spring! Blossoms with o - dors rare
 mer - ry glee, List to our call. Woods with their tri - bute ring,

Make earth a gar-den fair; Sound we thy prais - es with notes loud and
 Birds cheerful off'ring bring; Swelling the cho - rus in one gladsome

clear, Wel-come to Ar - bor Day! Bright words of cheer.
 song, Wel-come to Ar - bor Day! Ech - oes a - long.

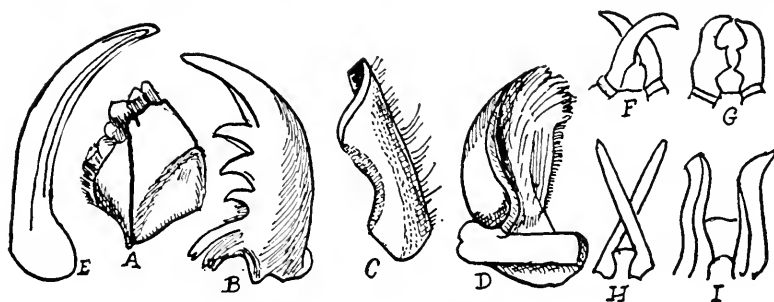
By Alice Hall Walter

A curious thing about the world we live in is that we see and hear so little of what is actually taking place. In order to know where to look and how to hear, one must start out in the spirit of an explorer, keenly alive to every slightest motion and faintest murmur.

A tree, if it could speak, would tell of the strange but beautiful world in which it lives. It acts as host to myriads of creatures, from its roots deep in the soil to its topmost branches waving high in air. It offers a safe nesting-place for different kinds of birds and at the same time a variety of food at different seasons of the year. Under its bark may be found cunningly wrought catacombs in which are stored the eggs and larvae of boring beetles; on the outside surface of its bark sharp eyes may detect clustered egg masses, protected, like those of the gipsy moth, by unpalatable hairs, or hidden in crevices and knotholes. The number of different kinds of insects on a single tree like an oak is so large that one would need to study a long time to learn the life histories of all of them, since each has a peculiar development, manner of living, and relation to the tree.

Five hundred kinds of insects on one tree seems a large number, but it appears small as compared with 300,000 or 600,000, somewhere between which lies the total number of known insects. Nearly everywhere on land and in the air insects are found, but only a few frequent the shore and none inhabit the deep sea. Fossil insects have been discovered in the rocks, showing that these delicate forms of life have existed for uncounted ages.

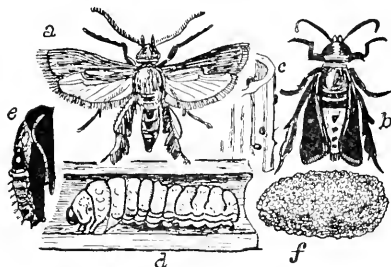
Could the oak tree speak, it would tell us that it has many foes as well as friends among the insects, that birds are sent to guard it from its enemies, and that without the help of all working together, its own life would be not only incomplete, but also impossible. So long as the relationship of one to the other is not disturbed, the tree is fairly safe, unless fire comes to ravage and destroy.



Mandibles, or Cutting Tools of Insects

A tree, then, is a hospitable caravansary for hosts of tenants and visitors, who come and go with the changing seasons. Among its insects guests there are mechanics of many kinds, borers, leaf-miners and rollers, crumplers, spinners, diggers, skeletonizers, masons and carpenters. There are insect aviators about its top, while from its branches may drop winged acrobats. Housekeeping insects are sheltered in it too, wild bees, ants and wasps. For one who enjoys life, a tree with its varied population is a paradise to explore. Just as truly, the way-side, fields, shores, gardens, and even the buildings in which human folk live, are full of unexpected wonders for those who will use their eyes and ears.

One of the surprises in this strange world is the variety any single kind of insect exhibits. There may be hundreds of boring insects and no two kinds alike, yet all may follow the same process of growth, first hatching out of the egg into a crawling, wormlike creature, sometimes partly covered with hairs (larva), which after a while rolls up to rest (pupa), until the time comes to emerge into a fully grown adult (imago). These four stages of growth are called a *complete metamorphosis*, which is a brief way of stating the complicated life history of the insect through *many changes of form*. On account of the difference of appearance that insects present in their larval, pupal and adult stages, they frequently puzzle or confuse even experienced observers.



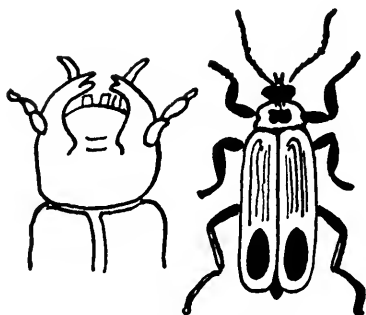
Metamorphosis of Corn Borer

far than to count and describe their insect foes and friends. Many insects are beneficial, that is a good thought to start with, when so much is said about insect enemies such as the gipsy, brown-tailed, tussock and satin moths, and the elm-leaf beetle.

It is well to remember that many of the worst insect foes have been brought to our native forests from distant parts by people who did not know, or at least did not stop to consider, what such strangers might do to upset the ordinary life of the society of trees.

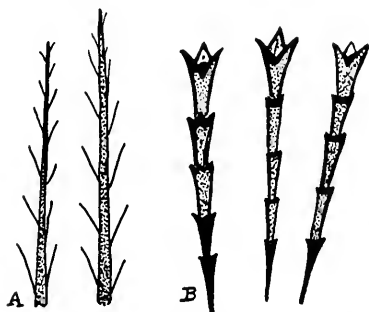
The destructive gipsy moth, for example, was brought from Europe about 1869 by a man who was experimenting to get a substitute for silkworms. Through an open window a few of the moths escaped. Within twenty-two years they increased to vast multitudes, which attacked trees, gardens, and even swarmed over houses through thirty towns. People became alarmed. Money was appropriated by the state to fight these foreign foes, until finally the only hope of saving large areas of woodland has been and for years to come will be by keeping up the fight every spring wherever egg-clusters of the moths abound.

Massachusetts, the state where the gipsy moth was introduced, has suffered untold damage, while Rhode Island with other adjoining states has to fight continually in certain sections to prevent both this moth and the poisonous brown-tail, another imported foe, as well as the elm-leaf beetle, from overrunning the trees. The beautiful tussock and satin moths are also foes of the forest which are well known in this state. The life history of all of these insects, whether introduced or native, shows how rapidly they increase, how much they can destroy in a short time, and how necessary it is to understand the relations of friendly



Soldier Beetle

insects and birds, without the free aid of which, forests would die, and much of garden, and field crops would be destroyed.



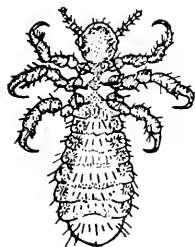
A—Ordinary Hairs; B—Poisonous Hairs of Larva of Brown-tail Moth

their crops were ravaged by the black cricket, is well known. Visitors to Salt Lake City admire the beauty of the monument which was erected to commemorate the service of the birds in saving from starvation the hard-pressed band, but those who know something of the ways of birds and insects see a story of Nature's means of keeping in check a devastating host.

From season to season the same insect foes are not ordinary as numerous, and therefore not as destructive, which is a help in one way at least, because if all were equally active at the same time, man would have little chance to grow crops, to raise garden truck, fruit, or to grow forage, and trees. The birds would be far out-distanced in their work of subduing insect foes, and life indoors as well as out would be unendurable.

Years when grasshoppers, army worms, the gipsy moth, canker-worms and cutworms, codling moths, the house and stable flies, mosquitoes, and other common insect enemies are unduly numerous, are remembered for the discomfort felt, the danger incurred, or by the scourge of illness following in the wake of their appearance.

One of the greatest benefits of modern science is the discovery and stamping out of the yellow fever and malarial mosquitoes, and the typhoid and other deadly flies, such as those that cause sleeping-sickness and probably aid in the transmission of infantile paralysis. There are always other less fatal ailments, such as the brown-tail moth rash, and eruptions due to the attacks of lice, fleas, ticks, and other common insect foes.



Head Louse

with the birds that feed upon some of them.

Birds are natural protectors of trees. When the early settlers from the East tried to start forests on the western prairies, they met with little or no success, the reason being that they could not fight singlehanded the insect foes which attacked their seedling groves. Birds were necessary to help keep these foes down to a safe number, and little by little birds found their way to the young groves and orchards, showing their ready adaptability to new conditions.

The story of the Mormon pioneers in Utah, to whose aid the gulls came, when

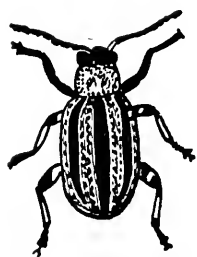


In the garden and fields bob-white is earning daily a handsome profit for the husbandman; in the forest, woodpeckers, nuthatches, and creepers are guarding not a few but all of the trees, which is more than anyone else can do; in the orchards and along the highway the chickadees, orioles, bluebirds, vireos, and warblers are at work early and late; swallows, swifts, nighthawks and whip-poor-wills scoop the air free of insects; hawks and owls are after field mice as well as insects; the gulls and bald eagle patrol the water and shore as scavengers. Even the much-debated crow is one of the greatest insect destroyers in certain months of the year. Everywhere, almost without exception, there may be found birds acting as guardians against insect and other foes.

When one stops to think about it, the only safe and really wise thing to do is to learn enough about this curious company of living things to know how to live safely and happily with them.

Nature is a pleasant teacher, ready at any time of day or year to make her mysteries plain. It takes some time, some thought, and much patience to learn her lessons, but they are never dull lessons, never unrewarding. Studying with Nature is like playing games, or working out puzzles, because eyes and ears, even noses and tongues, as well as hands and feet, must always be ready to do their part in getting true answers to the questions.

Take the striped cucumber beetle out in the garden or the squash borer or the now dreaded corn borer, introduced from Europe probably in broom-corn and first discovered in this country about 1917.



**Striped Cucumber
Beetle**

The handsome little yellow and black cucumber beetle is only about two-fifth of an inch long and half as wide in its adult form. Exactly when it lays its eggs "on leaf-stalks just below the surface of the ground" is not actually known from observation, but it is within the time when the vines or plants on which this insect preys are well up. The eggs soon hatch into white, worm-like creatures (larvae), which are very slender and quite small, being about three-tenths of an inch long and ten times less in width. The larvae are dark brown at both ends and a lighter brown below near the head end. Each has three pairs of regular legs and instead of a tail, an end leg called a pro-leg. Thus equipped, they burrow about the roots of

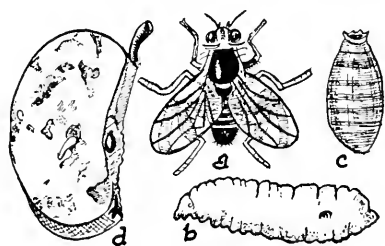
the cucumbers, even appearing on the stems above the ground.

For about a month they keep at work, while the gardener wonders why his plants are wilting and fail to develop perfect fruit.

When the larvae are "full-grown," that is, have eaten their fill, they shrink in size and remain quiet for three days before changing into the pupal or resting stage. As pupae they are about the same color as when larvae, with a few long spiny hairs on them, those on the upper side arising from small warts on the surface. After six or seven warm days, or about two weeks in colder weather, varying with the climate and the time of year, for this insect raises two and three generations a season, the adult beetles emerge from the pupae. If it is in the fall generation, fifty or sixty in a group may gather under and about the withered stems and leaves of the cucumber vines to hibernate until spring. As soon as warm weather comes, they are all ready to begin work on the cucumber

plants, just at the time when the roots, stem and shoots are most tender. The beetles injure the plants in another way, by carrying germs of the disease known as "cucumber wilt" from one plant to another. There are three ways, then, that these small insect foes damage cucumber plants, first, when the beetles eat in the plant above ground; second, when they carry disease germs from one plant to another; and third, when their larvae work underground upon the roots.

Besides birds, the striped cucumber beetle has a deadly enemy in the form of a *parasite*, that looks like a very tiny house fly. This also goes through a metamorphosis, laying its eggs, and changing into a maggot (larva) in the body of the beetle, where it eats up its host literally, for when it emerges as a flying insect, there is nothing left of its host.



Apple Maggot

Still another parasite attacks the cucumber beetle, a mite which looks like an insect, but which belongs in another family group with the common spiders.

The life-histories of scores of insects are as complicated as that of the cucumber beetle. It staggers the imagination to attempt to picture what is taking place under our very eyes day by day, which we neither see nor understand.

With an insect like the corn-borer, only careful observation will tell just what this introduced enemy will do in a strange land, where it finds its food under new conditions. Bird students are watching to see whether birds will discover the corn-borer. There are records of downy woodpeckers digging out corn-borers from cornstalks in the fall, which is most surprising for the reason that this woodpecker is a tree-protector. Locally, in New England, the downy woodpecker is known to destroy 17 per cent to 95 per cent of the corn-borers. Other birds known to feed upon this very destructive insect are robins, grackles, blackbirds, crows, starlings and the Mongolian pheasant.

The Farmers' Bulletin (No. 1548), issued by the United States Department of Agriculture, states that "careful observations in connection with plowing experiments in Ohio showed that robins and other birds were devouring at least 15 per cent of the borers which had crawled back to the soil surface after infested cornstalks had been plowed under. The Canadian authorities report that crows removed and devoured about 25 per cent of the corn-borers from broken-over cornstalks in certain badly infested fields of Essex and Kent Counties, Ontario, during the winter and spring."

Thus far the three insect parasites of the borer have made small headway in reducing the numbers of this worst enemy to corn. Birds learn the hiding places of insect foes often, but they may not always find certain insects palatable, particularly those that are covered with sharp hairs in their larval or "caterpillar" stage, or which secrete acrid juices. The Colorado potato beetle, that is known as the common "potato bug" here in the East, is not liked by many birds. The rose-breasted grosbeak, however, finds it not distasteful, and feeds greedily upon it. One or two pairs of grosbeaks easily rid a field of this pest.

Gipsy moth caterpillars are very hairy and unpalatable, but a variety of birds feed upon them, although, as yet, the eggs of this destructive insect, which are

likewise protected by a growth of fuzzy yellowish hairs, have not been discovered very generally by birds. Egg masses have been found with each egg punctured, which suggests that chickadees or some other tree-loving species has done this beneficial work for the forester.

Sometime, someone's sharp eyes will find out just how and when birds attack these tough, disgusting egg masses.



**Worm's Nest
punctured by birds**

The tent-caterpillars do not escape the birds by hiding in their fine-spun shelters in which sharp beaks make holes to reach the crowded mass of larvae inside. Neither can insect foes escape by seeking the ground, for certain birds probe the soil, the woodcock, for example, while others, like the towhee and white-crowned sparrow, scratch out insects with their feet.

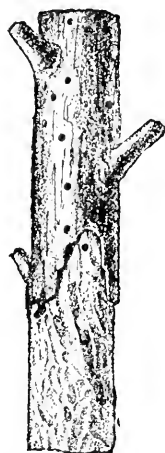
Some insects conceal themselves by their shape or color, resembling twigs, or curled-up leaves, or some other part of a tree or shrub or plant. Certain birds are similarly protected. One may be looking straight at a ruffed grouse or whip-poor-will in the woods, and not see either. Even as brilliantly colored a bird as the male scarlet tanager is difficult to catch sight of against the green branch of a tree.

Insects have eyes, sometimes two kinds, and these eyes are remarkable organs, some being compound, the other simple. Insects, however, probably see far, far less with all of their eyes than a bird with its single pair of eyes. Most birds have better vision than human beings. They need the keenest kind of vision not only to search for food, but also to find their way when flying. A hawk high up sees a field-mouse and circles down swiftly to its prey. A woodpecker, sidling around a tree, cannot see the wood-boring insects under the bark, but it taps and perhaps feels by percussion, or hears the hidden foes working in their hollowed galleries.

Not all insect foes are found about trees and in gardens. Orchards are visited by very many insects, some friendly, bearing pollen from one blossom to another and thus helping to make the trees bear more fruit, others unfriendly, like the curculios and maggots, which injure the developing fruit.

The larva of the friendly soldier-beetle eats the larva of the destructive plum-curculio, as do some birds, and many a nestling cries for more as its parents make their feeding-rounds. The astonishing amount of insect food that nestling as well as adult birds eat, gives a clue to their usefulness about the orchard.

Weed-seed eating birds have been examined when the stomach, crop and gullet were packed solid with seeds. Digestion goes on so rapidly that what would be gross overeating for human beings is only healthful activity for birds. Requiring the most energy of all living creatures in their life on the wing, they also require the most food. Birds therefore can be and are capable of accomplishing much good when they feed on insect and weed foes.



**Work of Wood
Borer**

Numbers mean very little unless one is used to thinking of them as so many real objects. It means a good deal to read that in the stomach of one yellow-billed cuckoo 217 fall webworms were found, and 250 tent caterpillars in that of another; that two flickers ate, one, 3000, and the other 5000 ants; that a single nighthawk devoured 60 grasshoppers for a meal, and a bobwhite 1700 weed seeds.

The crow is accused of doing so many things, like pulling up sprouting corn, and destroying the eggs or young of smaller birds, that it is well to know



Ground Beetle larva devouring curculio

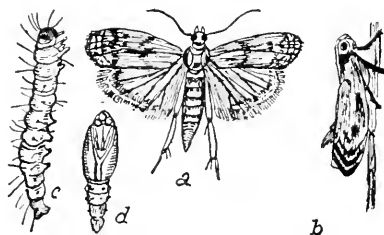
something of its useful habits. It eats large quantities of May beetles, the larvae of which are injurious to grassland, and the roots of many trees and shrubs. The crow likes cutworms and devours very many of them, and it eats grasshoppers and the pupae of the gipsy and brown-tail moth, as well as various other harmful insects.

Recently 350 fine trees were cut down in Goddard Park because they were so badly infested with the larch cankerworm, and were a source of danger to other trees. A few black-billed cuckoos, one of which has been observed to eat 27 cankerworms in two minutes, would be helpful forest aids in such an emergency, but not all kinds of birds live in the deep forest, or in evergreen forests, so one must find out which birds are likely to feed and rear their young in woodland, orchards, by roadsides, in fields, about buildings, or in wet or marshy places.

The different ways of studying birds lend a never-failing charm to their acquaintance.

When insects attack clothing, stored food products, or our own bodies, we wish that birds would become tame enough to join us in helping to get rid of the pests. In a poem written centuries ago, such a pet bird was described, that picked the fleas from the foot of its mistress quite fearlessly. In this day and generation people know better how to keep their bodies and houses clean and free from most insect foes.

Still, there are far too many house and stable flies, mosquitoes, bed-bugs, cockroaches and lice. Although birds cannot fight all of our battles for us, they will help whenever they are given a fair chance. It pays, not only for the beauty and joy of their presence and song, to have them about our homes, but also for the actual good they do. Barns harboring swallows, martin houses full of busy tenants, vines and hedges that provide shelter and nesting sites, as well as berries or haws for food, gardens bordered by wild fruits which birds prefer, fields where coveys of quail are protected, and orchards with nesting-holes and



Mediterranean Flour Moth

boxes, winter feeding stations, and bird baths for all times of the year are good investments.

Those who learn to watch birds with a camera discover much that is not seen with the eyes. Most people who have used both, say that shooting with a camera is far better sport than shooting with a gun. This is the reason why a good many people, especially men who are fond of outdoor life, enjoy the sport of photographing birds. It requires skill and patience to take a good picture of a bird, but much of a bird's daily round of activities can be studied carefully only in this way.

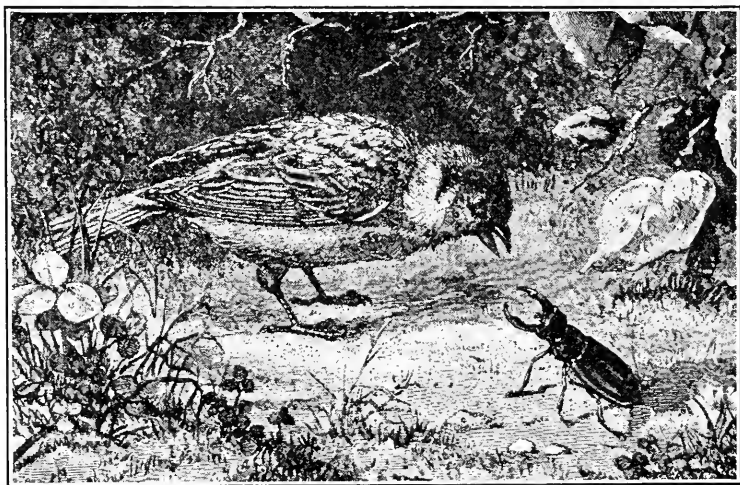
When Captain Knight took his motion-picture camera up steep cliffs and risked his life to photograph the golden eagle, and its nestlings, he discovered what he never could have seen in any other way. Besides, he made it possible for thousands of people who could never endure the hardship of climbing within sight of an eagle's eyrie to see the home-life of this kingly bird.

John Muir used to climb the tallest tree he could find in a storm, just to enjoy the wind and rain with the tree, and to get the "feel" of the raging elements. It is this mysterious "feel" of Nature that the birds help us to understand and enjoy. Useful as they are as protectors of our trees and crops, we value them even more highly for their beauty and delightful companionship.

President Coolidge on February 18 signed a very important bill, which thereafter became a law. It is known as the Game Refuge Bill, and provides for a chain of inviolate bird-sanctuaries throughout the United States, including Alaska, and the Hawaiian Islands, where bird life needs more protection.

By means of these sanctuaries, of which the United States Department of Agriculture will have perpetual charge, it is expected that our native birds will gradually increase so that our forests and fields will have more bird protectors and our waters be stocked with more game.

The government believes such sanctuaries are wise investments in conservation. It remains for our boys and girls as well as for all of the people to understand better the need of protecting bird life, and the benefits to be gained by their increase.



"Look Out"

SAVE THE FORESTS!

For the last decade and more the essential fact about the forest situation in America has been winked at or overlooked in most public discussions of the subject. This fact is that our forests are disappearing at a rate that involves most serious danger to the future prosperity of our country, and that little or nothing that counts is being done about it.

Out of 822,000,000 acres of virgin forest, only about one-eighth remains. Half of that remaining eighth, roughly speaking, is held by the Government and is safe from devastation. The rest is being cut and burned with terrible speed. And there is nowhere in the world anything like a sufficient supply of the kinds of timber we use to take the place of what we have destroyed.

The foregoing statement is taken from the introduction to a pamphlet by Maj. George P. Ahern, entitled "Devastated America." Major Ahern established the Philippine Forest Service, organized the protection and utilization of forty million acres of public timberlands, and not only laid the basis for a perpetual succession of timber crops, but earned cash enough to pay all the expenses of administration, all the expenses of the Philippine Forest School, (which he founded), and four million dollars to boot for the public treasury.

This outstanding success in forest conservation in the Philippines was built on Government control of lumbering. That is and has always been the foundation of such success throughout the world. And throughout the world the right of the Government to exercise such control in the public interest is recognized. Forest devastation in the United States cannot be stopped without it.

Forest fires are steadily growing worse in America, and fire prevention is absolutely indispensable. But the axe carelessly used is the mother of forest fires. The axe and not fire is our greatest danger. Until the axe is controlled there can be no solution of the fire problem, or the problem of forest devastation.

Over the National Forests, which cover one-fifth of our ultimate possible timber-growing area, we have established Government control of the axe. These forests are safe, they are well handled, and they will produce larger and larger crops of timber as time goes on. Over the other four-fifths of our forest land the axe holds unregulated sway.

Either we must control the axe on these privately owned lands, or the forests that are left will follow the road of those that are gone already.

The lumber industry is spending millions of dollars on propaganda in the effort to forestall or delay the public control of lumbering, which is the only measure capable of putting an end to forest devastation in America. It is trying to fool the American people into believing that the industry is regulating itself and has given up the practice of forest devastation. That is not true, and Major Ahern has proved it beyond question in his most valuable paper. We are still sowing the wind, and the whirlwind is not far off.—*Gifford Pinchot, in The Providence Journal.*

THE AUTUMN INTERLUDE

The thrush has tucked his flute away,
No more the valley hears
The crystal fall of golden notes,
As twilight nears.

No more the robin's banjo breaks
The hillside's sunny noons,
With songs that are the echoes gay,
Of old, sweet, southern tunes.

The mighty harps of hill pines sound
Their deep-toned chords no more;
Low harmonies alone they play,
Of seas upon the shore.

Ere long the autumn interlude,
Shall end when winds shall rise
And storms shall chant the choruses
Of wild, white wintry skies!

—Arthur Wallace Peach.

DANDELIONS

Dandelions, so golden bright,
Drop their heads and sleep at night;
And they wake at break of day,
Making all the fields look gay.

Then, like people, when they're old,
Faded turns their hair of gold;
Dry, and crisp and softly gray,
Each hair bears a seed away.

—Maude M. Grant.

THE HOME-PLACE

There's a little patch of ground where the tulips row by row
Are sleeping through the winter 'neath the coverlets of snow.
There's a spruce tree waiting for them in its coat of Koster blue,
And an elm tree standing sentry, as the soldiers often do,
And I'm sitting at a window where these lovely things I see,
Idly wondering about them and how came such joys to me.

There are countless busy people hurrying daily to and fro,
And they never dream that tulips may be planted, row by row,
And they never see the spruces and the elm tree standing there;
It may be they have lovely things to which they give their care.
It may be they've a patch of ground adorned with little trees
And haven't either time or thought to look at such as these.

Oh, here is all I care about in this old world of ours.
Here blossom in the summer time my choice of all the flowers.
Upon this little patch of ground stands all I treasure most,
The loveliest of everything that grows from coast to coast.
Nor could I find so fair a spot, wherever I might roam,
As is that little patch of ground which symbolizes home.

So sitting at my window as the people hurry by
I fancy they have plots of earth their labors beautify.
I fancy they have trees they love and tulips in the spring
And beds of sweet forget-me-nots to which their memories cling.
And they are merely hastening home with eager eyes to see
The trees and things which mean as much to them, as mine to me.

—Edgar A. Guest

FORESTRY ACHIEVEMENT

The reforestation of vast areas denuded by fire and the lumberman's axe is one of the vital achievements of the age.

Camp Fire Girls are reforesting thousands of acres each year by the planting of millions of little trees, but the most extensive, best organized and permanently created scheme for reforestation is in 2,500 camps of farm boys for which George E. Farrell, director of the Bureau of Farm Boy Activities of the United States Department of Agriculture, is responsible.

The reforestation by these boys' camps is at the height of its functioning in Wisconsin and New Hampshire.

These boys collect seeds from trees in their seeding time. They build seed beds and develop little trees and cultivate them for two years, and then plant them, often as many as ten or twelve acres in a year.

The largest and most efficient club is in Wisconsin. It has more than 200 members, and they plant as many as ten thousand trees in a day.

This achievement is of inestimable value to the state and to the country as a whole, and this is only one of the many lines of achievement of these 2,500 camps and clubs.—*Journal of Education*.

The elm trees in New England are magnificent. I have been wondering why they are so much more beautiful than other trees. It is not because of the greenness of their leaves, for they are almost as beautiful when bare in winter. It is not because of their massiveness, for other trees are as large and sturdy as elms. I think it must be their fine proportion and symmetry. The exact balance of material in their great trunk-like branches produces a counterpoise which satisfies the eye of the beholder. When limbs have fallen, or they come in close proximity to others causing unequal growth, the elm loses its great beauty.—*Dorothy Burch*, Jenks Junior High School, Pawtucket.

HOW THE LEAVES CAME DOWN

"I'll tell you how the leaves came down,"

The great Tree to his children said:

"You're getting sleepy, Yellow and Brown,

"Yes, very sleepy, little Red,

It is quite time to go to bed."

"Ah," begged each silly, pouting leaf,

"Let us a little longer stay;

Dear Father Tree, behold our grief,

'Tis such a very pleasant day,

We do not want to go away."

So, for just one more merry day

To the great Tree the leaflets clung,

Frolicked and danced, and had their way,

Upon the autumn breezes swung,

Whispering all their sports among—

"Perhaps the great Tree will forget,

And let us stay until the spring,

If we all beg, and coax and fret."

But the great Tree did no such thing;

He smiled to hear their whispering.

"Come, children, all to bed," he cried;

And ere the leaves could urge their prayers,

He shook his head, and far and wide,

Fluttering and rustling everywhere,

Down sped the leaflets through the air.

I saw them; on the ground they lay,

Golden and red, a huddled swarm,

Waiting till one from far away,

White bed clothes heaped upon her arm,

Should come to wrap them safe and warm.

The great bare Tree looked down and smiled,

"Good-night, dear little leaves," he said.

And from below each sleepy child

Replied, "Good-night," and murmured,

"It is so nice to go to bed!"—*Susan Coolidge*.

THE BLUEBIRD

I know the song that the bluebird is singing,
Out in the apple-tree where he is swinging;
Brave little fellow! the skies may be dreary;
Nothing cares he while his heart is so cheery.

Hark! how the music leaps out from his throat—
Hark! was there ever so merry a note?
Listen awhile, and you'll hear what he's saying,
Up in the apple-tree, swinging and swaying.

"Dear little blossoms, down under the snow,
You must be weary of winter, I know;
Hark while I sing you a message of cheer—
Summer is coming! and spring-time is here!

"Little white snowdrop, I pray you, arise!
Bright yellow crocus! come, open your eyes;
Sweet little violets, hid from the cold,
Put on your mantles of purple and gold;
Daffodils! daffodils! say, do you hear?—
Summer is coming! and springtime is here!"

—Emily Huntington Miller.

PROFITS FROM WOODLAND

The following report of the profits obtained from a town forest in New Hampshire demonstrates that reforestation not only adds beauty to the countryside but when properly managed, woodlands yield actual profits to the owner:

"The town of Warner, New Hampshire, owns a woodland track of eight hundred acres and is reported to be making a profit from it. Located on the slope of a high hill, the land was given to the town by the son of the late Senator Chandler in accordance with his father's wishes.

"From this small forest area is obtained enough fuel for the heating of the schools and the town hall and library, and a considerable excess of firewood is cut and sold. There is also a respectable amount of timber cut for use in the construction of bridges and new buildings. A 'forest fund' of a little more than two thousand dollars has been accumulated from six years' sales of timber, besides the profitable saving to the town through ownership of its own fuel supply.

"The conditions in Warner are worthy of note, not only because of the small but substantial financial benefits accruing from the town's woodland property, but because they mark a genuine achievement in public forest conservation. The woods are managed with great care, and only such trees are cut as may wisely be dispensed with for the good of the forest. And wherever the cutting is done new trees are immediately planted. Much new pine and spruce has thus been started which will ultimately increase the value of the tract.

As a demonstration of systematic forestry this practical example in New Hampshire ought to arouse a widespread spirit of emulation. In detail it may be less scientific than the systems in common practice in several European countries, but in principle and effect it is along the same lines. And it is only by such intelligent effort that a start toward American reforestation can be made."

THE WHITE PINE TREE

The pine tree confided to her old friend wind
That she a sweet singer would be.
She wanted to warble like visiting birds,
To chirrup and chirp and chee-chee.
"I can't change a tree to a bird," said the wind,
"But this for my old friend I'll do,
If you will make harp strings, upon them I'll play
Soft music as I'm passing through."

The dictionary calls the White Pine Tree "the prince of the forest." See one standing on a hill throne, beside a rock throne seat, against the blue wall of its out of door throne room; see it dressed in ermine, the gift of King Winter, and a very grand prince it will seem to be. It holds its leaves above the branches. This gives the tree a tufted look, and lets us see the graceful sweep of the boughs.

The strange leaves give this tree its name. That same old dictionary says that the word pine is for the pins, which are more commonly called needles. Five leaves come out together. They are wrapped around like a bundle. They shed the wrapping after a while. The needles grow three to five inches in length. When the wind blows across them they act like harp strings, making a pleasant sound which people often speak of as "the music of the pines."

The young pines show the pointed tops and nearly level branches, which come out in fives, pointing in different directions. Pines grow commonly from 50 to 70 feet but they sometimes stretch up 200 feet. As they increase in age they lose their clear outline but they are always picturesque. I keep in mind a row of old pines that the sea winds have blown into a one-sided shape. They make an interesting picture to see and to remember. Pines sometimes live 200 to 300 years.

The wood of the white pine is white. It is very useful. It makes boards of good size, shingles, laths and boxes. It is used in finishing the inside of houses. Often the trunks go sailing the seas as masts of boats.

White pines are native American trees. They are common in the eastern part of our country. They grow from winged seeds which are shed from the cones. The cones are 4 to 6 inches long.—*Lila Hurley, in Providence Bulletin.*

Agriculture is the nation's greatest industry. It has over ten million employes—three times as many as its nearest rival. It has fifty-seven billion dollars of investment—twice as much as its nearest rival. Its products have an annual value of seven billion dollars—twice as much as its nearest rival.

It is only when we stop to consider that practically all of the food we eat, all of the clothes we wear and all of the tobacco we smoke, as well as the greater part of our household furnishings, are either directly or indirectly products of agriculture, that we realize the extent to which the human race is dependent upon agriculture for its subsistence and accord to it its proper place in the nation's economy.

Agriculture, moreover, is not merely a way of making money by growing crops; it is not merely an industry or a branch of business in which the farmer alone is concerned. It is a business affected with a public interest, in that the farmer in the course of his pursuit of a living and a private profit is the custodian of the use, care and conservation of the land which must supply and sustain the needs and requirements not only of those now living but of posterity as well.—*Harry M. Atkinson.*

LIKE GLAD BIRDS OF SPRINGTIME.

Not too slow.

(INVOCATION.)

v.

mf

1. Like glad birds of Spring-time, Our prais - es we sing, To
2. God bless us we pray Thee, A young stu - dent band, In

cres.

God the great giv - er Of ev' - ry good thing, Till
truth and up - right - ness E'er help us to stand; And

earth with glad voi - ces Shall ech - o a - gain, From
bless then the la - bor, Our hands do to - day, 'Mid

cres. *slower and marked.*

wood - land and mead - ow, From moun - tain and plain.
birds, songs and flow - ers, Of bright sun - ny May.

MAPLE KEYS

When a maple tree begins to grow it shows a stem and two leaves. The leaves are opposite each other. All through the life of the tree the leaves grow in twos, opposite each other. When the leaves have fallen off, opposite buds may be seen on the branches just above the places where the leaves were. If you will look at a maple branch, you will see that the twigs grow in twos opposite each other, also. It is the same with the fruits. A pair of winged seeds hang on a stem and point in opposite directions. They are joined together—twins if there ever were twins. In time the twins separate, but while they are together they look like birds whose wings are spread for flying.

They can fly a little, too. Off on the wind they go to quite a distance from the mother tree. After dropping them, the winds sometimes pick them up and carry them still farther away. In time the fruits settle into the earth and start growing into new trees. Often the wing points upward. The winged seeds of the maples are called keys. I wonder if they are called that because they look like keys unlocking their home in the ground.

Locksmiths are the maple trees,
For their seeds they make door keys,
The keys as wings the babies use
Until to settle down they choose.
On winds they fly awhile in mirth,
And then, unlocking doors of earth,
They plant themselves and start to grow,
But never in an even row.

The different kinds of maples ripen their keys at different times of the year. The white, silver, or soft maple has its seeds ready for planting in May. The red or swamp maple sows its seeds in June. The seeds of both begin growing right away. The rock maple, or hardwood maple, or sugar maple, or sugar tree, also the Norway maple, and the sycamore maple do not ripen their seeds until the autumn. Their keys may be seen through the winter.

Children who mount leaves would find it interesting to mount matching keys on the same sheets of paper.—*Lila Hurley, in Providence Bulletin.*

I LEARN THE WAY

From every tree
I learn the way—
Upon each frosty,
Autumn day—

They turn so vivid,
Ere they die;
Thanksgiving is
Their last, brave cry!

—*The Christian Herald.*

WEALTH

I'm a rich man and I boast it!
Rich in friendship tried and true,
And a king's lot would be happier if such friends as mine he knew.
I'm a rich man and I know it; rich in laughter and in mirth,
And I wouldn't trade that treasure for the greatest bank on earth.
I'm a rich man and I shout it! Who in all this world can see
More of sky and hill and valley than the Lord permits to me?
When the summer birds are pouring out their music to the sky,
Can the man whose purse is fatter hear more melody than I?
Can a hundred million dollars buy more perfume from a rose,
Or get more of rain and sunshine than my little garden knows?
Let who will count wealth in figures, pages wide and columns long,
I'll count mine in lasting friendships and in hours of mirth and song.

—*Edgar A. Guest.*

INSECTS KNOWN TO INJURE TREES, CROPS, AND STORED PRODUCTS

Oak	suffers from 537 injurious species of insects.
Elm	" " 107 " " " "
Popular	" " 264 " " " "
Willow	" " 396 " " " "
Birch	" " 270 " " " "
Alder	" " 119 " " " "
Beach	" " 154 " " " "
Hazel	" " 97 " " " "
Hornbeam	" " 88 " " " "
Pine	} " " 299 " " " "
Larch	
Spruce	
Fir	

Damage caused by injurious insects in the United States exceeds \$300,000,000 annually. In 1900 the Hessian fly caused \$100,000,000 damage to wheat.

Annually the codling moth injures fruit to the amount of \$20,000,000.

Annually the corn crop suffers a loss of \$80,000,000; the wheat crop, a loss of \$100,000,000; the hay crop, a loss of \$530,000.

In 1873 the cotton crop suffered a loss of 25 to 50 million dollars, and later the cotton boll weevil caused untold damage.

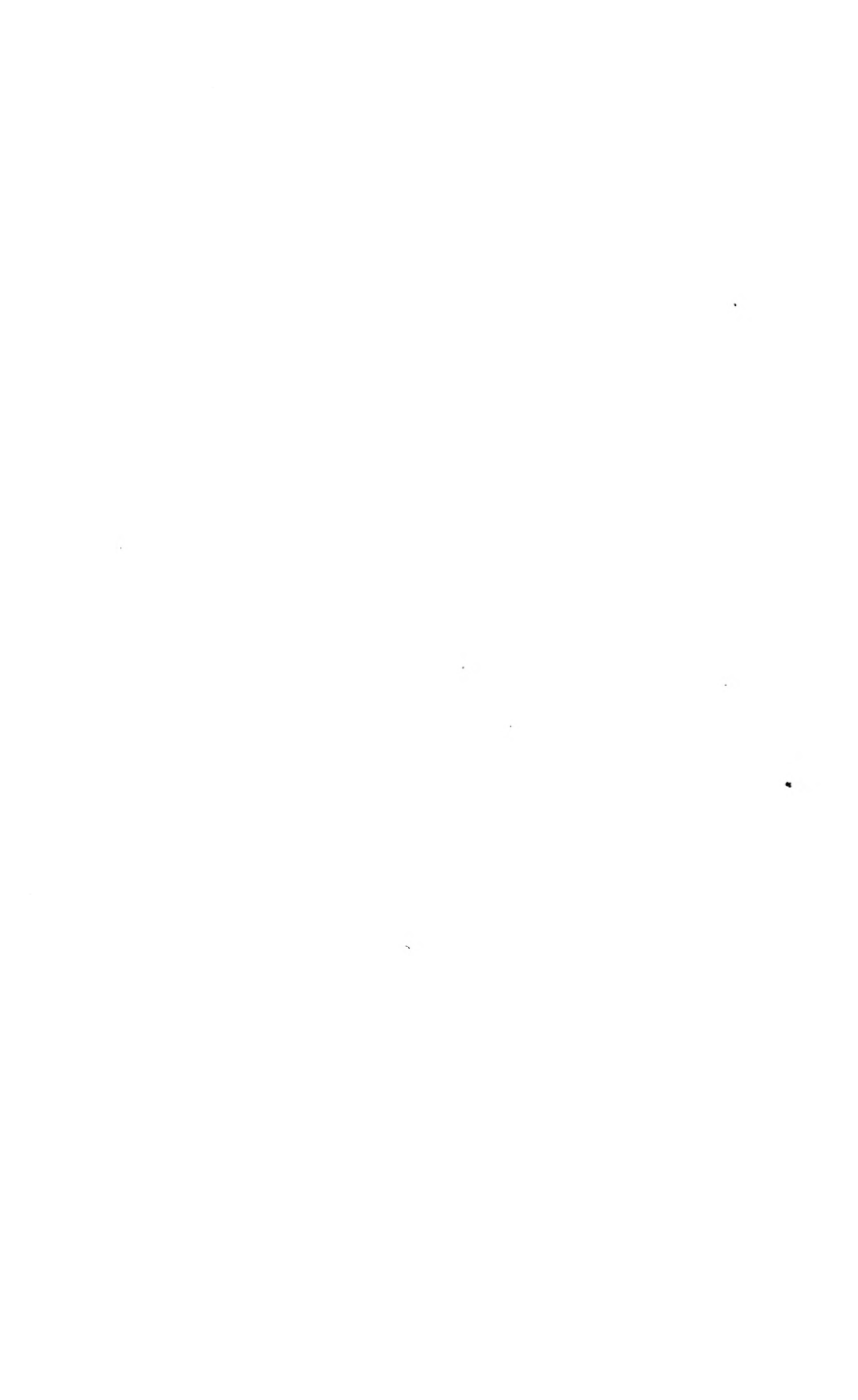
One-third of the possible cranberry crop on Cape Cod is destroyed by insects. \$2,000,000-worth of Paris Green is used each year in this country to fight the "potato bug."

In 1904, \$795,100,000 was believed to be a conservative estimate of insect ravages in the United States. An annual loss of 10 per cent is now considered too low an estimate.

"Three factors have caused this change: first, the concentration of crops of the same kind into large contiguous acreage; second, the introduction of over one hundred pests from foreign countries which have been here long enough to make their presence seriously felt; and third, the great reduction in the number of insectivorous birds."—*E. H. Forbush*.

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SCENE IN PARKER WOODLAND

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